

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION V
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February 25, 1970

Memo to File

DEPARTMENT OF THE NAVY - NRDL DISESTABLISHMENT GROUP
SAN FRANCISCO BAY NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA
LICENSE NO. 4-13488-1, CONFIRMATORY SURVEY OF FACILITIES

REF: U. S. Naval Radiological Defense Laboratory
License Nos. 4-487-3, SMB-376 and SNM-35

During the period September 15, 1969, through January 30, 1970, a total of 22 visits were made by H. North and myself for the purpose of conducting a confirmatory survey of facilities being vacated by the U. S. Naval Radiological Defense Laboratory (NRDL). Attachment I to this memorandum shows the facilities surveyed and the dates of the surveying. The surveys consisted of measuring the alpha and beta-gamma radiation levels and taking of smear samples to detect removable contamination. The survey results showed the licensee has met the de minimus levels required for release of facilities to unrestricted use.

An October 1, 1969, memo to file from H. North - Subject: Department of the Navy, U. S. Naval Radiological Defense Laboratory, San Francisco, California, License No. 4-487-3, Independent Survey of Portion of Building 815, Hunters Point - discusses the particulars concerning the closure of NRDL and the vacating of facilities. The memo also discusses the survey results for the visits made on September 15-16, 1969. On October 28, 1969, license No. 4-487-3, issued to NRDL, was terminated and replaced with the subject license. Officially NRDL ceased to exist on November 3, 1969, when the NRDL Disestablishment Group of the San Francisco Bay Naval Shipyard came into being. As of November 3, the licensee possessed some packaged radioactive waste (<10 mCi), a few alpha sources and a few spots of contamination in excess of the de minimus limits. Licensee surveying and decontamination was completed on January 2, 1970.

Survey instruments used to make the confirmatory survey were supplied by LRL, Berkeley. Beta-gamma surveys were made with either a Victoreen Thyac II, Model 489, or an Anton Electronic Laboratories CD V-700, Model 6, instrument. Alpha surveys were made with Alpha Air Proportional Count Rate Meter fabricated by LRL. Smears were counted in the Region V Nuclear Measurements Corporation Model PC-3A windowless gas

flow proportional counter. The counter efficiency is 3.4% for tritium, 50% for alpha and 50% for beta except tritium. All survey meters had been calibrated by LRL within 3 months of the date of use.

All areas were surveyed for beta-gamma; however, measurements for alpha radiation were made only in those areas where alpha contamination may have occurred. Alpha surveys were made in all areas of the 6th floor of Building 815. Alpha surveys were also made in the following rooms in Building 815: 179, 1109, 222, 218, 218A, 4125, 4129, 4181. In addition the liquid waste storage pit behind Building 364 was surveyed for alpha contamination.

Smears were made using a 4.25 cm filter paper. All smears were counted for beta plus alpha. Those samples which showed 100 dpm or more were then counted for alpha only. A total of 742 smear samples were taken. Three of the smear samples showed removable contamination levels of 100 dpm/100 cm² or more. The results of these three samples were as follows:

<u>Sample No.</u>	<u>Alpha + Beta</u> dpm/100 cm ²	<u>Alpha</u> dpm/100 cm ²
13-218-1	1363 *	95
15-SF-8	214	0
23-529-5	374 **	

* A resample of this location showed 684 dpm/100 cm² alpha plus beta and 0 dpm/100 cm² alpha.

** This is tritium contamination.

All meter surveys showed less than 500 dpm/100 cm² fixed alpha contamination. Beta-gamma fixed contamination was less than 0.2 mrad/hr (at 1 cm) average with maximum level of 0.8 mrad/hr (at 1 cm). Almost all areas showed only background radiation.

Attachments II and III are diagrams showing Buildings 364, 365, 506 and 529. Attachment IV thru IX show the 6 floors of Building 815 and the dates the various areas were surveyed. Building 815 has a cafeteria and dinning area on what would be the 7th floor or top floor of the building. The top floor was surveyed on October 29, 1969.

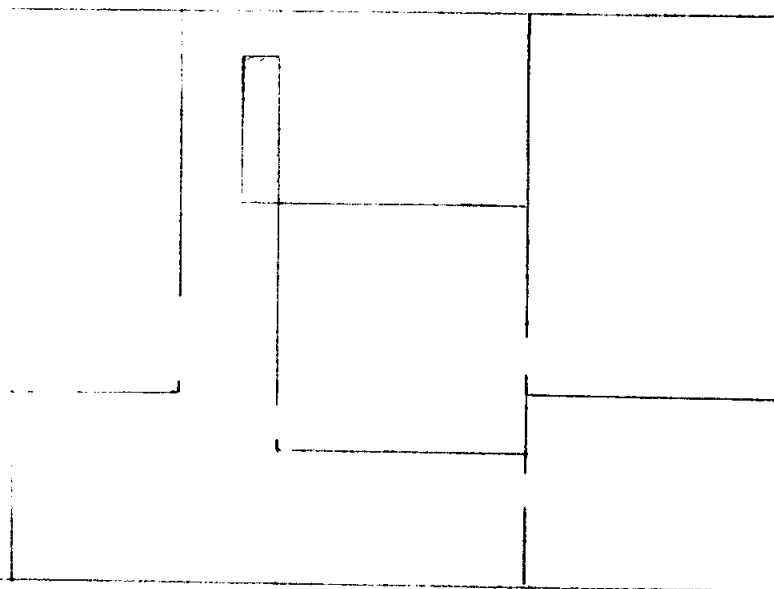
R. F.

R. F. Fish
Radiation Specialist

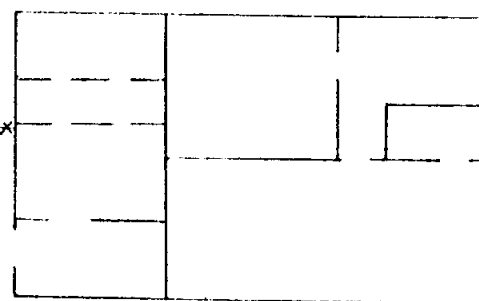
CO:V:RFF

Building 815	-	September 15 and 16, 1969 October 8, 9, 10, 13, 14 and 29, 1969 November 19 and 20, 1969 December 8, 9 and 23, 1969 January 12, 13, 14, 15, 26, 27, 29, and 30, 1970
Building 364	-	December 18, 1969
Building 365	-	December 18, 1969
Yard and Pit (between Bldgs 364 & 365)	-	December 18, 1969
Building 506	-	December 23, 1969
Building 529	-	December 23, 1969
Building 517 (1 Co-60 irradiation room)	-	January 15, 1970
Building 816	-	November 19, 1969
Area 707 (radioactive waste storage yard)	-	January 26, 1970
Building 418, Islais Island		December 9, 1969

Liquid Waste
Storage Pit



Building 364



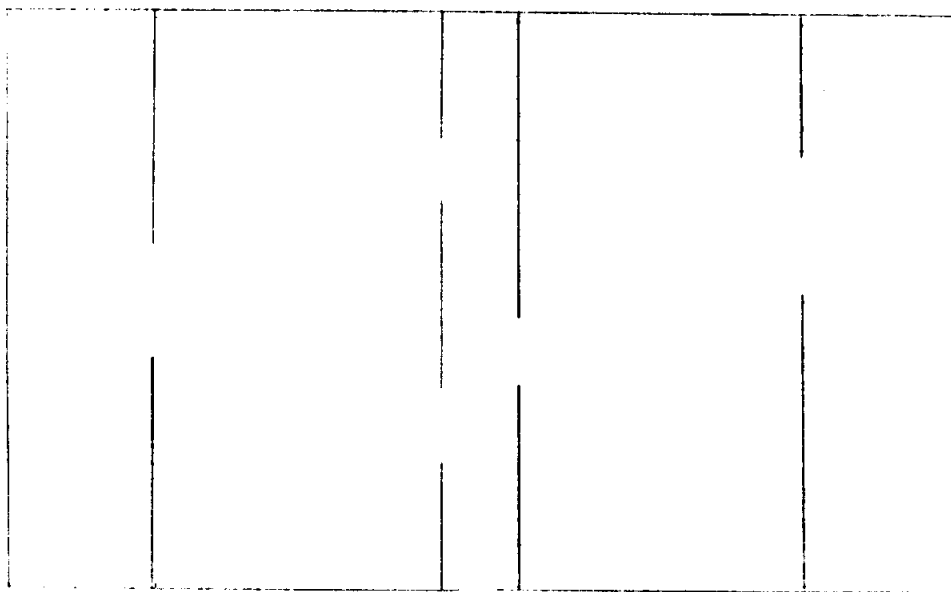
Building 365

-x-x-x-

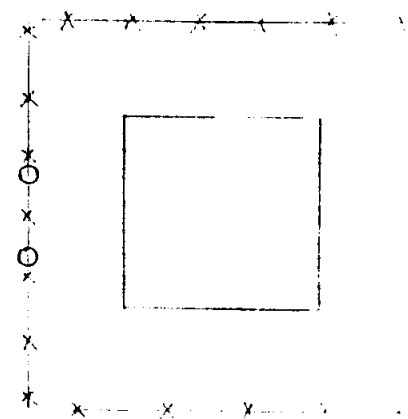
6' chain, linked 10000
with 3 strands of barbed
wire on top

Attachment II

Appendix III

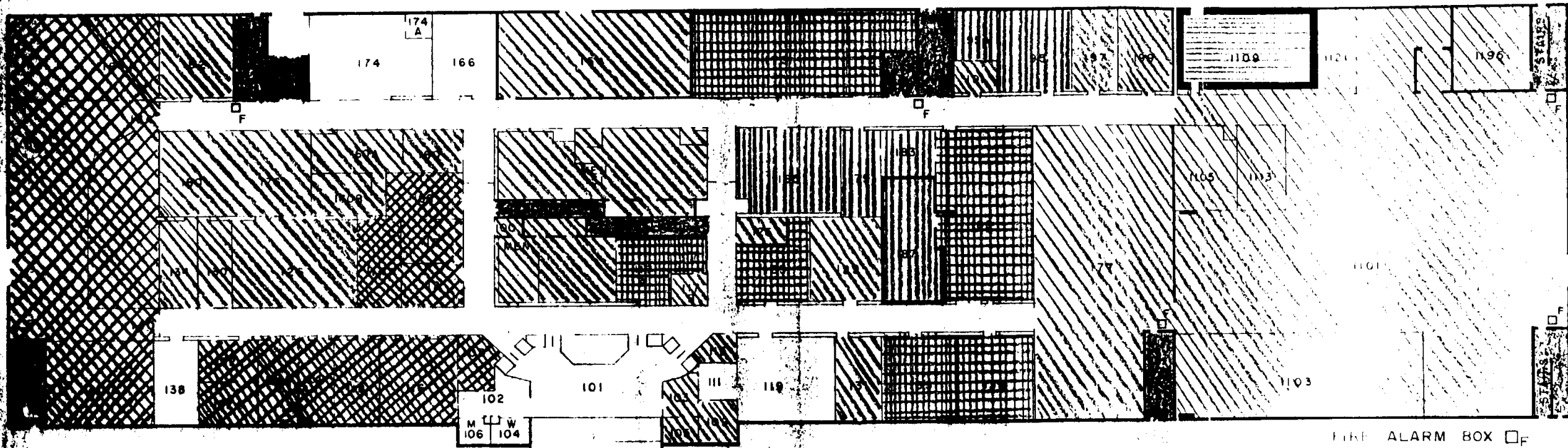


Building 506



Building 509

x — x 6' channels, 6' apart
only 2' high



Surveyed 1/13/70



Surveyed 1/27/70



Surveyed 1/14/70 and 1/27/70



Surveyed 1/29/70



Surveyed 1/26/70



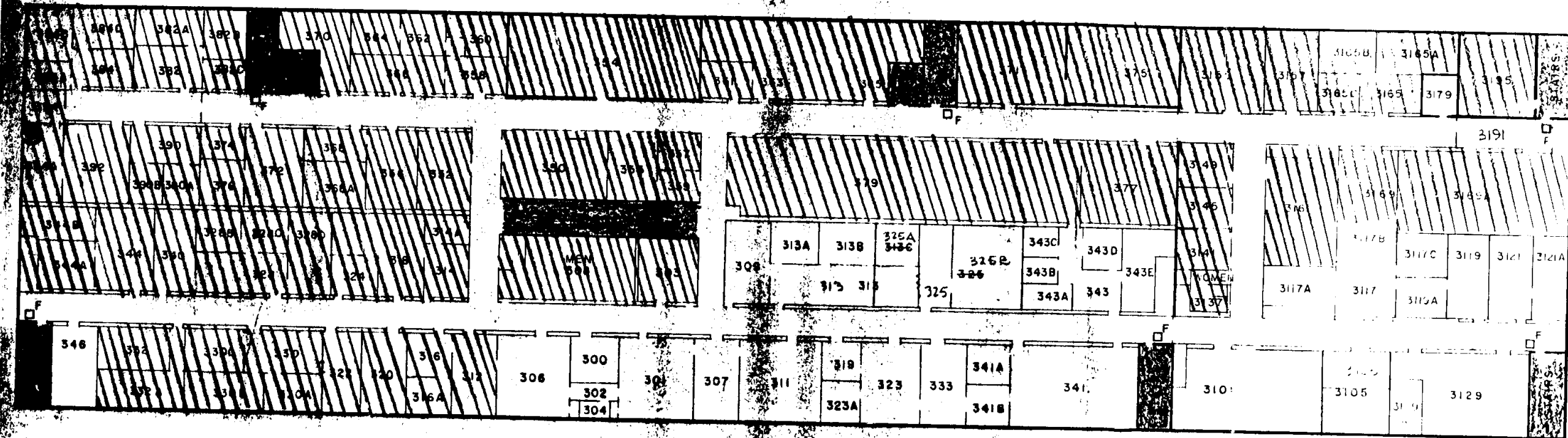
Surveyed 1/30/70



Surveyed { Escalator 1/14/70
Stairs 1/15/70, 1/26/70
Elevators 1/30/70

FIRST FLOOR PLAN

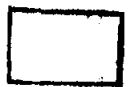
FIRE ALARM BOX ☐ F



Surveyed 11/19/69



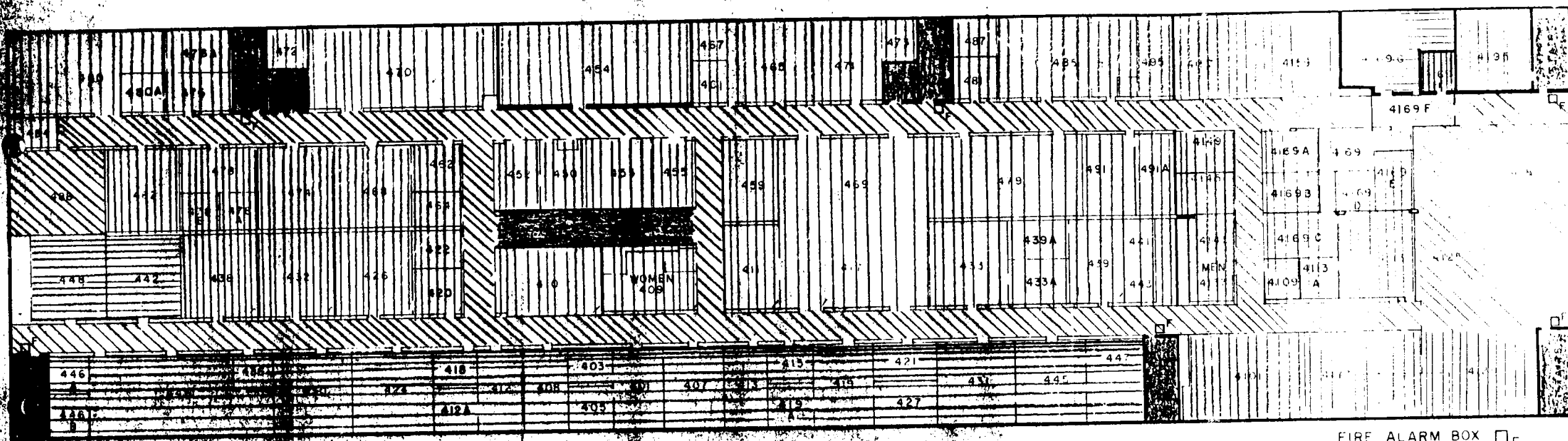
Surveyed { Escalator 1/14/70
Stairs 1/15/70, 1/26/70
Elevators 1/30/70



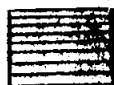
Surveyed 11/20/69

THIRD FLOOR PLAN

FIRE ALARM BOX □_F



FIRE ALARM BOX ☐ F



Surveyed 10/13/69



Surveyed 10/14/69



Surveyed 10/29/69



Surveyed

{ Escalators 1/14/70
Stairs 1/15/70, 1/26/70
Elevators 1/30/70

FOURTH FLOOR PLAN

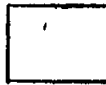


Surveyed 10/10/69



Surveyed

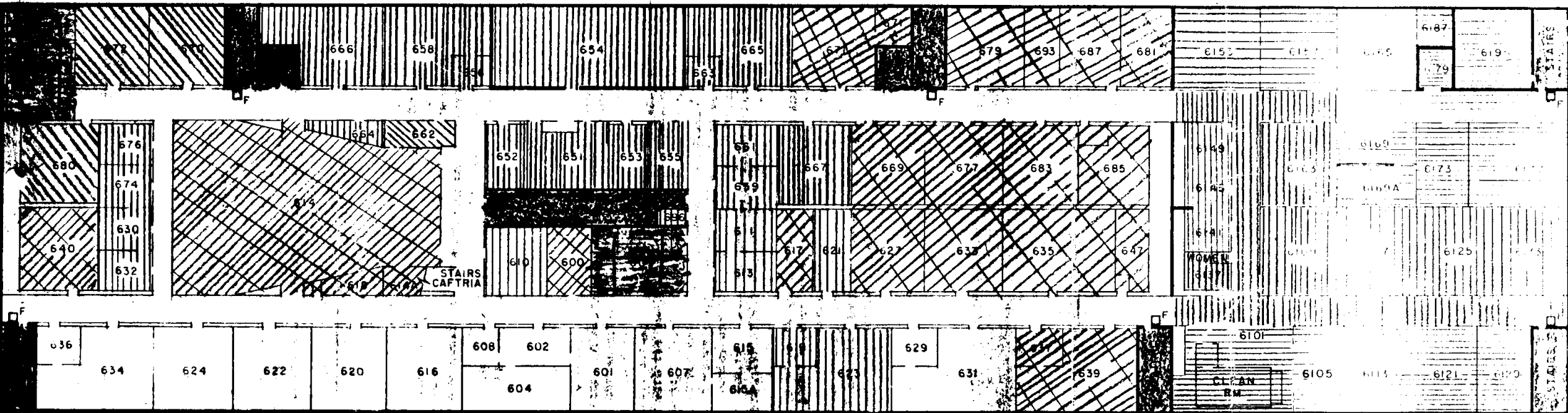
{ Escalators 1/14/70
Stairs 1/15/70, 1/20/70
Elevators 1/30/70









Surveyed 10/10/69

FIFTH FLOOR PLAN

FIRE ALARM BOX ☐ F



-  Surveyed 10/12/69
-  Surveyed 10/8/69
-  Surveyed 10/9/69
-  Surveyed 10/10/69
-  Surveyed 9/14/69

 Surveyed { Escalators 1/14/70
 Stairs 1/15/70, 1/24/70
 Elevators 1/30/70
SIXTH FLOOR PLAN

FIRE ALARM BOX ☐ F

Note: Halls were surveyed 10/12/69